

The opinion in support of the decision being entered today was not written
for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte GLENN SUSSMAN
and
DONALD M. COHEN

Appeal No. 2003-0468
Application No. 09/447,752

ON BRIEF

Before STAAB, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 7,
which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates generally to the field of cataract surgery and more particularly to a pumping chamber for a handpiece for practicing the liquefracture technique of cataract removal (specification, p. 1). A copy of the dependent claims under appeal is set forth in the appendix to the appellants' brief. Claims 1, 4 and 6, the independent claims on appeal, read as follows:

1. A liquefracture handpiece, comprising:
 - a) a body having an irrigation lumen; and
 - b) a pumping chamber integral with the body and attached to the irrigation lumen, the pumping chamber capable of producing pressure pulses with
 - i) a force of between 0.03 grams and 50.0 grams,
 - ii) a pressure pulse rise time of between 1 gram/second and 50,000 grams/second and
 - iii) a frequency of between 1 Hz and 200 Hz.
4. A liquefracture handpiece, comprising:
 - a) a body having a first irrigation lumen; and
 - b) a pumping chamber attached to the first irrigation lumen, the pumping chamber capable of producing pressure pulses with a force of between 0.03 grams and 50.0 grams.
6. A liquefracture handpiece, comprising:
 - a) a body having an irrigation lumen; and
 - b) a pumping chamber integral with the body and attached to the irrigation lumen, the pumping chamber capable of producing pressure pulses with a pressure pulse rise time of between 1 gram/second and 50,000 grams/second.

Claims 1 to 7 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,735,815¹ to Bair.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 14, mailed April 24, 2002) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 13, filed January 26, 2001) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the Bair patent, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The appellants argue (brief, pp. 2-3) that claims 1 to 7 are not anticipated by Bair since Bair does not disclose a pumping chamber capable of producing pressure pulses

¹ Issued April 7, 1998.

with either (1) a force of between 0.03 grams² and 50.0 grams, (2) a pressure pulse rise time of between 1 gram/second and 50,000 grams/second, or (3) a frequency of between 1 Hz and 200 Hz.

The examiner admits that Bair does not explicitly disclose a pumping chamber producing pressure pulses with a force of between 0.03 grams and 50.0 grams, a pressure pulse rise time of between 1 gram/second and 50,000 grams/second, and a frequency of between 1 Hz and 200 Hz. The examiner does take the position (answer, pp. 3-4) that Bair inherently meets all three of the above-noted limitations. With respect to the force of the pumping pulses being between 0.03 grams and 50.0 grams, the examiner stated that

while these units [(i.e., grams)] are not directly comparable to the units of psig^[3], a force of 0.03 grams would be barely operable if at all, and a force of 50.0 grams would probably obliterate the eye. Thus, appellant again claims the entire spectrum of forces usable in liquefaction.^[4]

With respect to the force of the pumping pulses having a pressure pulse rise time of between 1 gram/second and 50,000 grams/second, the examiner stated:

² Grams is a unit of mass not a unit of force. While force is equal to mass times acceleration (thus, a stationary object having a mass of 50 grams would exert a force of 49,000 dynes due to gravity providing an acceleration of 980 cm/sec²), it is not clear to us that one skilled in the art would understand what is meant by "a force of between 0.03 grams and 50.0 grams" since the liquid is being pumped and most likely has an acceleration different than that of gravity.

³ Bair discloses (column 4, lines 9-11) that the pumped fluid may be at 300 psig or more and that the maximum pressure developed during the pressure pulse may exceed 1000 psig.

⁴ The appellants have not disputed this statement.

It is agreed that Bair '815 does not disclose the pressure pulse rise time. However, the claimed range of between 1 gram/second and 50,000 grams/second is broad and the upper range (50,000 grams/second) certainly approaches a rectangular wave pattern as disclosed by Bair '815, column 51 [sic, column 3, line 51]. Specifically, if the force was 50.0 grams, and the pressure pulse rise time was 50,000 grams/second, then the force of 50.0 grams would be reached in 0.001 seconds, which is a rectangular wave shape. If the force was 0.03 grams, and the pressure pulse rise time was 50,000 grams/second, then the force of 0.03 grams would be reached in 6×10^{-7} seconds.

With respect to the force of the pumping pulses having a frequency of between 1 Hz and 200 Hz., the examiner stated "the Bair '815 handpiece would not function adequately if the pulse did not fall above 1 Hz. The frequency claimed (1 Hz to 200 Hz) covers almost the entire spectrum of liquefracture."

A prior art reference need not expressly disclose each claimed element in order to anticipate the claimed invention. See Tyler Refrigeration v. Kysor Indus. Corp., 777 F.2d 687, 689, 227 USPQ 845, 846-847 (Fed. Cir. 1985). Rather, if a claimed element (or elements) is inherent in a prior art reference, then that element (or elements) is disclosed for purposes of finding anticipation. See Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631-33, 2 USPQ2d 1051, 1052-54 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). It is well-settled that under principles of inherency, when a reference is silent about an asserted inherent characteristic, it must be clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Continental Can Co. v.

Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). As the court stated in In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)(quoting Hansgirk v. Kemmer, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939)):

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [Citations omitted.] If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

It is well settled that the burden of establishing a prima facie case of anticipation resides with the United States Patent and Trademark Office (USPTO). See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). When relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. See Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Patent App. & Int. 1990).

After the USPTO properly establishes a prima facie case of anticipation based on inherency, the burden shifts to the appellants to prove that the subject matter shown to be in the prior art does not possess the characteristics of the claimed invention. See

In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138 (Fed. Cir. 1986).

In our view, the examiner's quoted statement above regarding the claimed pumping force provides a basis in fact and/or technical reasoning to reasonably support the determination that Bair's pumping chamber inherently is capable of producing pressure pulses with a force of between 0.03 grams and 50.0 grams. Hence, appellants' burden before the USPTO is to prove that Bair's pumping chamber is not capable of producing pressure pulses with a force of between 0.03 grams and 50.0 grams. The appellants have not come forward with any evidence to satisfy that burden. Compare In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977); In re Ludtke, 441 F.2d 660, 664, 169 USPQ 563, 566-67 (CCPA 1971). Appellants' mere argument that Bair does not disclose this amount of force is not evidence. See In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974)(attorney's arguments in a brief cannot take the place of evidence).

For the reasons set forth above, the decision of the examiner to reject independent claim 4 and dependent 5⁵ under 35 U.S.C. § 102(e) as being anticipated by Bair is affirmed.

In our view, the examiner's quoted statements above regarding the claimed pressure pulse rise time and frequency does not provide a basis in fact and/or technical reasoning to reasonably support the determination that Bair's pumping chamber is inherently capable of producing pressure pulses with either a pressure pulse rise time of between 1 gram/second and 50,000 grams/second or a frequency of between 1 Hz and 200 Hz. With regard to the pressure pulse rise time, Bair specifically teaches (column 3, lines 50-51) that the pressure versus time profile of each pulse approaches a rectangular waveform. Thus, the pressure pulse rise time may exceed 50,000 grams/second and therefore a pressure pulse rise time of between 1 gram/second and 50,000 grams/second is not a natural result flowing from the operation as taught by Bair. With regard to the pressure pulse frequency, Bair specifically teaches (column 4, lines 21-25) that after one high pressure fluid jet pulse is completed the apparatus is set to deliver another pulse, however, the actuating valve must be reopened to initiate another pulse, and accordingly the pumping mechanism is not free-running. Thus,

⁵ The appellants have grouped claims 4 and 5 as standing or falling together (brief, p. 2). Thereby, in accordance with 37 CFR § 1.192(c)(7), claim 5 falls with claim 4.

each of Bair's pulses is caused by actuation of the actuating valve⁶ and therefore does not have a set frequency. Moreover, it is not clear to us that the structure of Bair's pumping chamber is capable of providing a new pressure pulse in one second or less. Accordingly, a frequency of between 1 Hz and 200 Hz is not a natural result flowing from the operation as taught by Bair.

For the reasons set forth above, the decision of the examiner to reject claims 1 to 3, 6 and 7 under 35 U.S.C. § 102(e) as being anticipated by Bair is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 4 and 5 under 35 U.S.C. § 102(e) is affirmed and the decision of the examiner to reject claims 1 to 3, 6 and 7 under 35 U.S.C. § 102(e) is reversed.

⁶ The actuating valve may comprise a pneumatic switch on the handpiece, or a footswitch coupled by tubing to the port 39.

No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

LAWRENCE J. STAAB
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

JENNIFER D. BAHR
Administrative Patent Judge

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